

Lanes, Volumes, Timings

1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps 07/30/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	42	60	786	164	552	63	128	265	204	176	46
Future Volume (vph)	13	42	60	786	164	552	63	128	265	204	176	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Frt			0.850			0.850			0.850		0.969	
Flt Protected		0.988		0.950			0.950			0.950		
Satd. Flow (prot)	0	1840	1583	3433	1863	1583	1770	1863	2787	3433	1805	0
Flt Permitted		0.867		0.950			0.609			0.950		
Satd. Flow (perm)	0	1615	1583	3433	1863	1583	1134	1863	2787	3433	1805	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			229			600			288		18	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		656			686			333			671	
Travel Time (s)		14.9			15.6			6.5			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	46	65	854	178	600	68	139	288	222	191	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	60	65	854	178	600	68	139	288	222	241	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2	1	1	2	1	1	2	
Detector Template		Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)		100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)		0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)		6	20	20	6	20	20	6	20	20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Free	Prot	NA	Free	Perm	NA	Prot	Prot	NA	
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4		Free			Free	2					
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		1.0	1.0		4.0	4.0	4.0	5.0	1.0	

Future AM Peak 10:35 am 04/30/2025 Future

Synchro 12 Report

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Lanes, Volumes, Timings

1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps 07/30/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	7.0	7.0		7.0	7.0		10.0	10.0	10.0	11.0	7.0	
Total Split (s)	16.0	16.0		29.0	45.0		30.0	30.0	30.0	25.0	25.0	
Total Split (%)	16.0%	16.0%		29.0%	45.0%		30.0%	30.0%	30.0%	25.0%	25.0%	
Maximum Green (s)	10.0	10.0		23.0	39.0		24.0	24.0	24.0	19.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		C-Max	Min		Min	Min	Min	None	None	
Act Effect Green (s)		8.4	100.0	42.5	56.9	100.0	13.3	13.3	13.3	11.8	31.1	
Actuated g/C Ratio		0.08	1.00	0.43	0.57	1.00	0.13	0.13	0.13	0.12	0.31	
v/c Ratio		0.44	0.04	0.59	0.17	0.38	0.45	0.56	0.46	0.55	0.42	
Control Delay (s/veh)		53.5	0.1	25.8	12.3	0.7	48.3	48.6	7.0	46.5	26.3	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)		53.5	0.1	25.8	12.3	0.7	48.3	48.6	7.0	46.5	26.3	
LOS		D	A	C	B	A	D	D	A	D	C	
Approach Delay (s/veh)		25.7			15.1			24.3			36.0	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)		37	0	209	50	0	41	85	0	70	112	
Queue Length 95th (ft)		77	0	327	106	0	79	136	37	104	156	
Internal Link Dist (ft)		576			606			253			591	
Turn Bay Length (ft)												
Base Capacity (vph)		161	1583	1459	1060	1583	272	447	887	652	893	
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.37	0.04	0.59	0.17	0.38	0.25	0.31	0.32	0.34	0.27	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 3:WBL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay (s/veh): 20.8

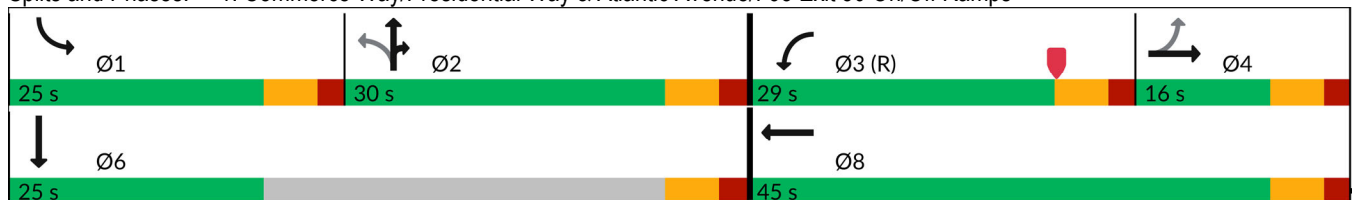
Intersection LOS: C

Intersection Capacity Utilization 59.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps



Future AM Peak 10:35 am 04/30/2025 Future

Synchro 12 Report

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Lanes, Volumes, Timings

1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps 07/30/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	51	28	426	90	298	61	185	926	610	226	35
Future Volume (vph)	6	51	28	426	90	298	61	185	926	610	226	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Fr't			0.850			0.850			0.850		0.980	
Flt Protected		0.994		0.950			0.950			0.950		
Satd. Flow (prot)	0	1852	1583	3433	1863	1583	1770	1863	2787	3433	1825	0
Flt Permitted		0.951		0.950			0.586			0.950		
Satd. Flow (perm)	0	1771	1583	3433	1863	1583	1092	1863	2787	3433	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			229			324			1007		11	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		656			686			333			671	
Travel Time (s)		14.9			15.6			6.5			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	55	30	463	98	324	66	201	1007	663	246	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	30	463	98	324	66	201	1007	663	284	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Free	Prot	NA	Free	Perm	NA	Prot	Prot	NA	
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4		Free			Free	2					
Minimum Split (s)	7.0	7.0		7.0	7.0		10.0	10.0	10.0	11.0	7.0	
Total Split (s)	16.0	16.0		29.0	45.0		30.0	30.0	30.0	25.0	25.0	
Total Split (%)	16.0%	16.0%		29.0%	45.0%		30.0%	30.0%	30.0%	25.0%	25.0%	
Maximum Green (s)	10.0	10.0		23.0	39.0		24.0	24.0	24.0	19.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Act Effect Green (s)		10.0	100.0	23.0	39.0	100.0	24.0	24.0	24.0	19.0	49.0	
Actuated g/C Ratio		0.10	1.00	0.23	0.39	1.00	0.24	0.24	0.24	0.19	0.49	
v/c Ratio		0.35	0.02	0.59	0.13	0.20	0.25	0.45	0.70	1.02	0.32	
Control Delay (s/veh)		48.1	0.0	37.8	20.3	0.3	33.9	36.2	5.1	80.6	16.0	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)		48.1	0.0	37.8	20.3	0.3	33.9	36.2	5.1	80.6	16.0	
LOS		D	A	D	C	A	C	D	A	F	B	
Approach Delay (s/veh)		32.4			22.1			11.5			61.2	
Approach LOS		C			C			B			E	

Future PM Peak 12:45 pm 04/30/2025 Future

Synchro 12 Report

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Lanes, Volumes, Timings

1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps 07/30/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		37	0	136	40	0	34	110	0	~225	101	
Queue Length 95th (ft)		79	0	187	74	0	72	179	53	#343	158	
Internal Link Dist (ft)		576			606			253			591	
Turn Bay Length (ft)												
Base Capacity (vph)		177	1583	789	726	1583	262	447	1434	652	899	
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.35	0.02	0.59	0.13	0.20	0.25	0.45	0.70	1.02	0.32	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 40 (40%), Referenced to phase 3:WBL, Start of Yellow

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 1.02

Intersection Signal Delay (s/veh): 29.8

Intersection LOS: C

Intersection Capacity Utilization 68.1%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Commerce Way/Presidential Way & Atlantic Avenue/I-93 Exit 30 On/Off Ramps

			
Ø1	Ø2	Ø3 (R)	Ø4
25 s	30 s	29 s	16 s
			
Ø6		Ø8	
25 s		45 s	